

W-GM-5200

Wafer Edge Grinding Machine



TOSEI ENGINEERING CORP.

W-GM-5200 Specification

Basic Specification

Wafer size	Φ300 mm
Wafer thickness	0.6 - 1.0 mm
Wafer shape	Φ300 mm (with notch)
Peripheral Grinding	
Outer diameter (groove)	Φ200 mm
Outer diameter (periphery)	Φ202 mm
Inner diameter	Φ30 mm
Flange thickness	20 mm
Peripheral velocity	5000 min ⁻¹ (maximum)
Spindle bearing system	Grease lubrication, mechanical bearing system
Spindle driving system	Built-in system
Grinding speed	Any setting possible
Notch grinding	
Outer diameter (groove)	Φ1.8-2.4 mm
Outer diameter (periphery)	Φ3.8 mm
Shank diameter	Φ3 mm
Revolution speed	80000 min ⁻¹
Spindle bearing system	Air bearing system
Spindle driving system	Air turbine system
Grinding speed	0.1-1.0 mm / sec
Signal tower	3-color indicator (the color and flashing / lighting can be changed by key input)

Option

Low Damage Grinding System

Periphery Fine spindle frequency	Rated: 36000 min ⁻¹ Max: 70000 min ⁻¹ (motor)
Spindle bearing system	Air bearing system
Spindle driving system	High Frequency Built-in System
Notch Fine spindle frequency	150000 min ⁻¹
Spindle bearing system	Air bearing system
Spindle driving system	High Frequency Built-in System

Wheel profile (Periphery fine)

Groove Diameter	Φ46.6-42 mm
Outer Diameter	Φ50 mm
Flange Thickness	15 mm

Wheel profile (Notch fine)

Groove Diameter	Φ1.8 - 2.2 mm
Outer Diameter	Φ3.8
Shank Diameter	Φ3 mm

Mechanical specifications

Wafer thickness measurement	
Resolution	1 μm
Repeated measurement accuracy	Within ±2 μm
Measuring system	Non-contact system
Alignment mechanism	
System	Laser measuring system
Resolution	1 μm
Centering accuracy	Within ±50 μm
Grinding table linear axis (X / Y / Z)	
Resolution	1 μm
Driving system	AC servomotor and ball screw
Grinding table revolution axis (θ)	
Resolution	0.001°
Driving system	DD motor and high resolution mechanism
Grinding table flatness	
Surface fluctuation	Less than 10 μm / 360°
Transfer unit	
Conveying system	Suction conveying system
Vacuum generating source	Vacuum ejector
Wafer identifying sensor	Vacuum sensor
Cleaning unit	
Cleaning system	Spinner cleaning
Drying system	Dry air system
Driving system	AC servomotor
Revolution speed	500-1500 min ⁻¹
Loading and unloading unit	
Type	Cassette carrier type (with options)
Other specifications	
Dimensions, Weight	2515 (W) x 1475 (D) x 2000 (H) / 2300*mm
W-GM-5200-3C	3040 (W) x 1775 (D) x 2000 (H) / 2300*mm 5000kg *including the signal tower
W-GM-5200-8C	3040 (W) x 1775 (D) x 2000 (H) / 2300*mm 5000kg *including the signal tower

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